

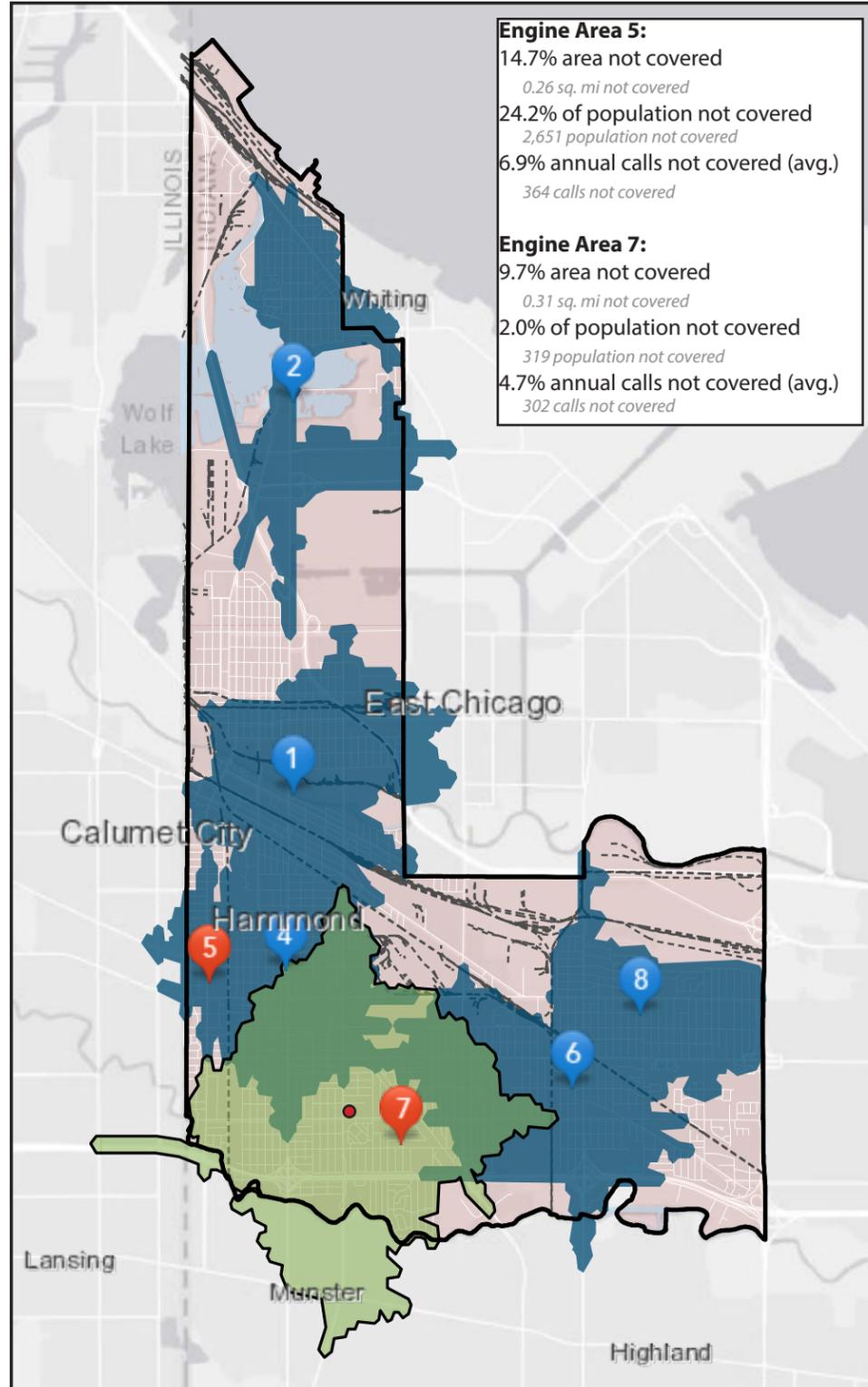
Future Station Analysis

Combined Stations 5 & 7

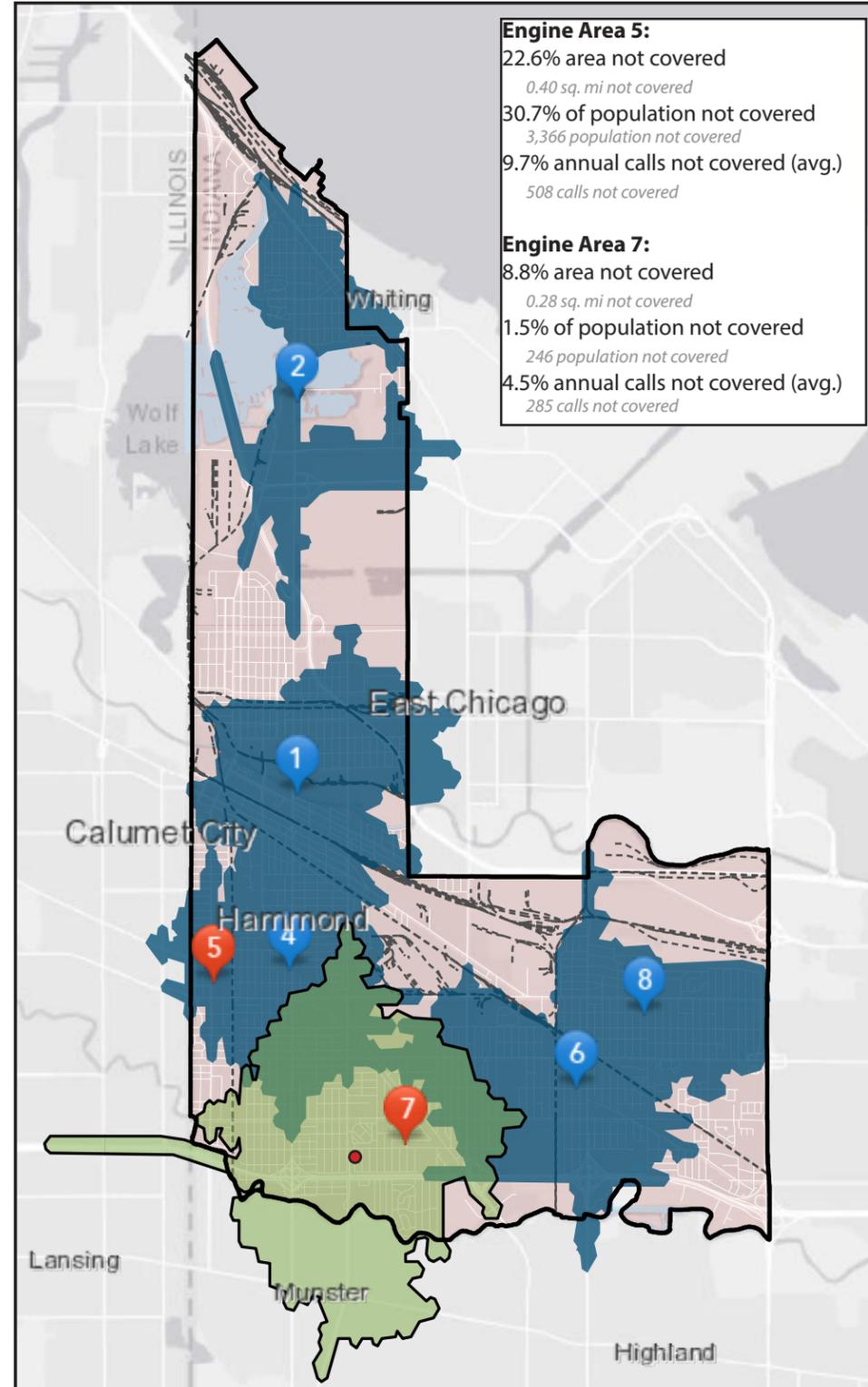
The following locations were selected for analysis by the City of Hammond

- 4-minute recommended drive radius
- New Station 4-minute Drive Coverage
- Engine Areas 5 & 7 - not currently covered

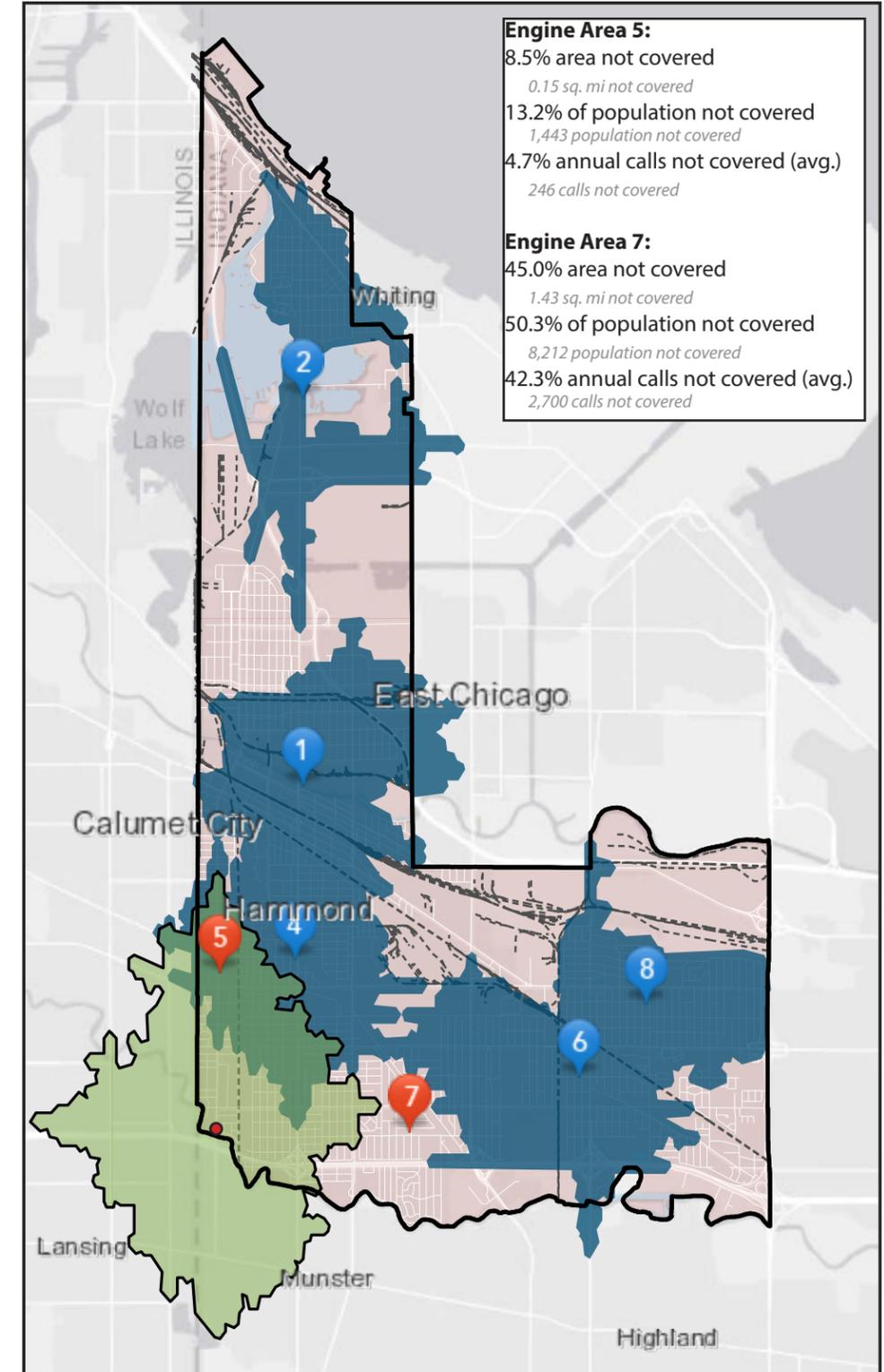
① Columbia & 173rd



② Columbia & 175th



③ 7500 Hohman Ave.



Future Station Analysis

Side-By-Side Data Comparison

Area, Population & Calls Not Covered

By Engine Area

	ENGINE AREA 5			ENGINE AREA 7		
	Area <i>Not Covered</i>	Population <i>Not Covered</i>	Calls <i>Not Covered</i>	Area <i>Not Covered</i>	Population <i>Not Covered</i>	Calls <i>Not Covered</i>
Current Conditions (Baseline) <i>Includes Coverage from 5&7</i>	11.9% 0.21	13.4% 1,468	4.2% 221	11.6% 0.37	14.5% 2,368	7.9% 504
Test Site 1 <i>Columbia & 173rd</i>	14.7% 0.26	24.2% 2,651	6.9% 364	9.7% 0.31	2.0% 319	4.7% 302
Test Site 2 <i>Columbia & 175th</i>	22.6% 0.4	30.7% 3,366	9.7% 508	8.8% 0.28	1.5% 246	4.5% 285
Test Site 3 <i>7500 Hohman Ave.</i>	8.5% 0.15	13.2% 1443	4.7% 246	45.0% 1.43	50.3% 8212	42.3% 2700

Summary:

This table represents the area, population and calls NOT covered by each Test Site scenario. The gray area depicts the current conditions as a baseline.

The areas in **red** indicate being HIGHER than the baseline. The areas in **green** indicate being LOWER than the baseline.

Area, Population & Calls Not Covered

Difference from Existing Conditions "Baseline"

	ENGINE AREA 5			ENGINE AREA 7		
	Area <i>Not Covered</i>	Population <i>Not Covered</i>	Calls <i>Not Covered</i>	Area <i>Not Covered</i>	Population <i>Not Covered</i>	Calls <i>Not Covered</i>
Test Site 1 <i>Columbia & 173rd</i>	-2.8% -0.05	-10.8% -1,183	-2.7% -143	1.9% 0.06	12.5% 2049	3.2% 202
Test Site 2 <i>Columbia & 175th</i>	-10.7% -0.19	-17.3% -1,898	-5.5% -287	2.8% 0.09	13.0% 2122	3.4% 219
Test Site 3 <i>7500 Hohman Ave.</i>	3.4% 0.06	0.2% 25	-0.5% -25	-33.3% -1.06	-35.8% -5844	-34.4% -2196

Summary:

This table represents the difference between each Test Site and the baseline. For example:

Test Site 1:

The area covers 2.8% less in Engine Area 5 but it covers 1.9% more area in Engine Area 7 than the existing coverage conditions.

New Road Analysis

Additional Coverage by New Railroad Overpass

With new road and railroad overpass, it is estimated that coverage for stations 6 & 8 are improved by the following

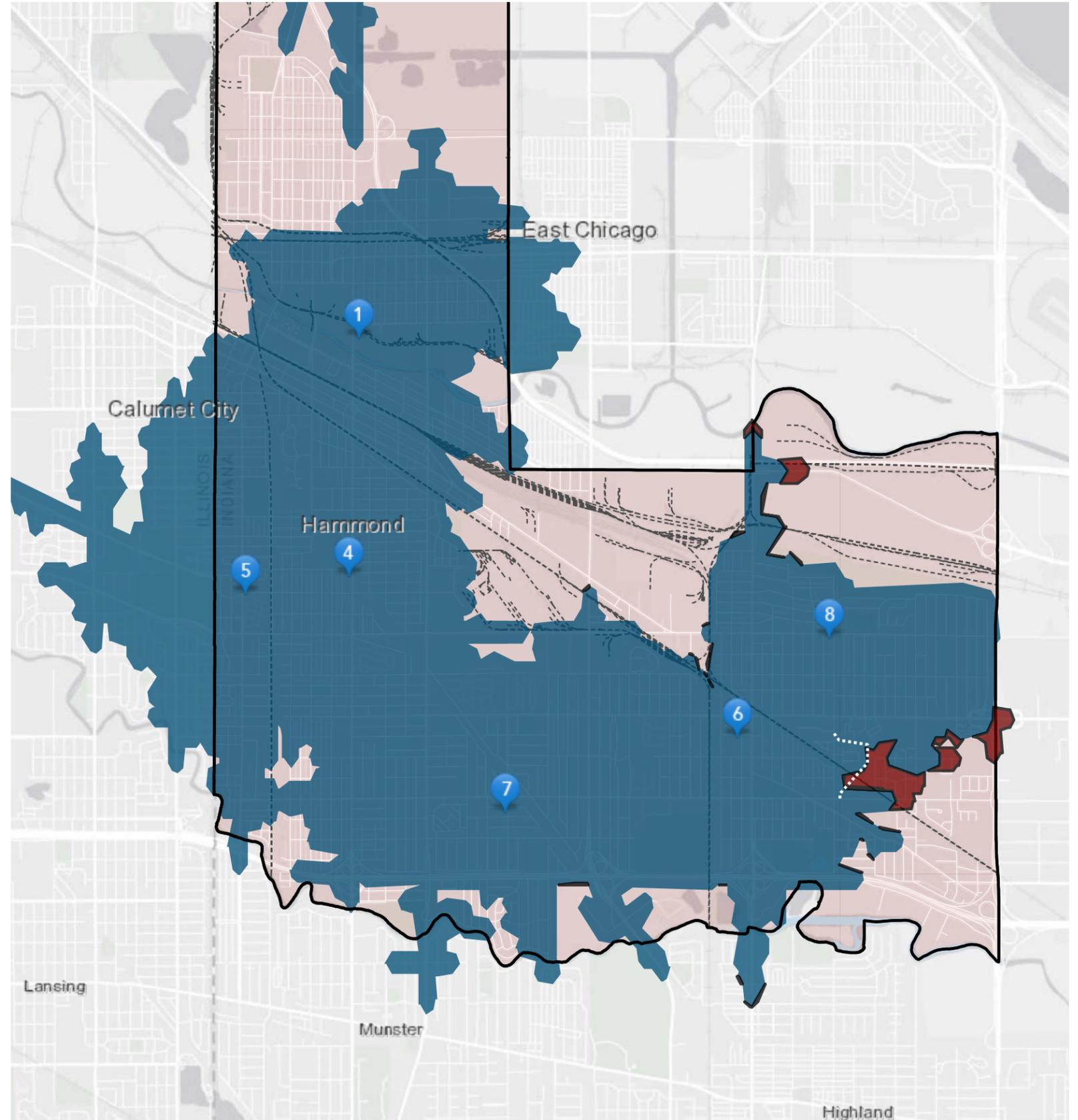
- 5,701** additional population covered
- 279** additional annual calls covered
- 0.2** additional sq. mi. covered

NOTE: Without the overpass, travel time from Station 8 to the furthest residence south of the railroad tracks is ~15-20 minutes.

With the overpass, travel time can be reduced to less than 6 minutes.

LEGEND

-  4-minute recommended drive radius from stations*
-  Additional coverage gained from new road & overpass



*Assuming standard traffic and driving conditions.

Future Considerations

Areas of Opportunity - Test Analysis

Introducing a new station in the "areas of opportunity" for additional coverage will impact the city in the following way:

New Station "3" Southeast Hammond / Hessville

Additional Calls Covered: 241 average calls/year (+1.9% covered)
 Additional Population Covered: 3,084 population (+4.0% covered)

New Station "9" Central Hammond

Additional Calls Covered: 678 average calls/year (+5.3% covered)
 Additional Population Covered: 6,310 population (+8.1% covered)

LEGEND

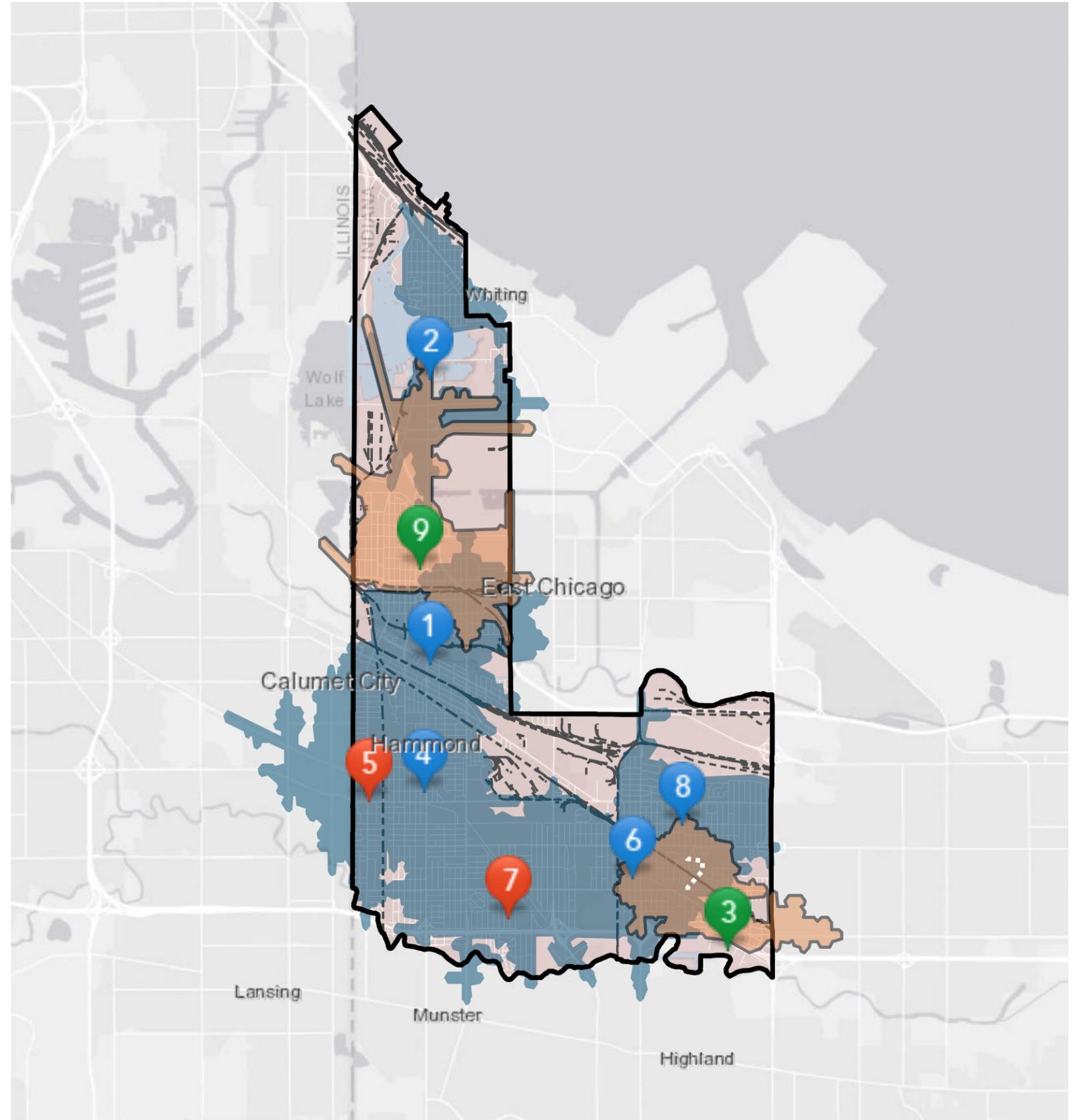
-  4-minute drive radius*
-  Additional Coverage for Test Sites
-  Not covered in 4-minute drive radius
-   Test Station Sites**

Summary:

The addition of stations in the Central and South East areas of Hammond could greatly increase fire department coverage.

**Assuming standard traffic and driving conditions.*

***The following sites for "3" and "9" are solely for informational purposes. The exact location of these sites has not been studied in detail for availability.*



Additional Existing Conditions Analysis

No Railroad "Barrier"

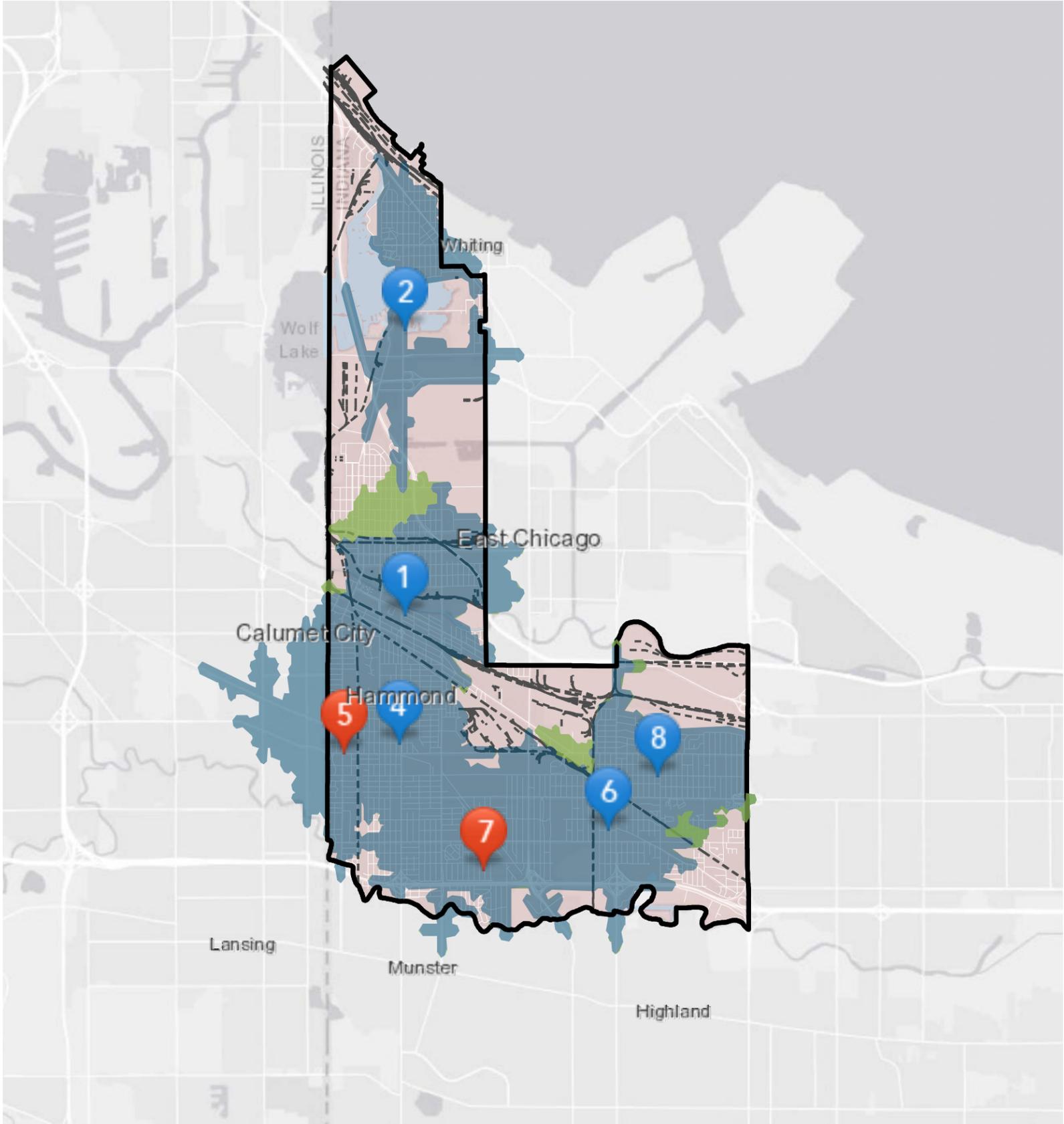
LEGEND

-  5&7 to be combined in future
-  4-minute recommended drive radius*, not allowing at-grade railroad crossing
-  Engine Areas 5 & 7 - not currently covered
-  Additional 4-minute recommended drive radius*, allowing at-grade railroad crossing

Summary:

The following map represents a 4-minute drive radius, allowing at-grade railroad crossing for emergency response vehicles.

**Assuming standard traffic and driving conditions.*



Additional Existing Conditions Analysis

1.5-Mile Travel Radius

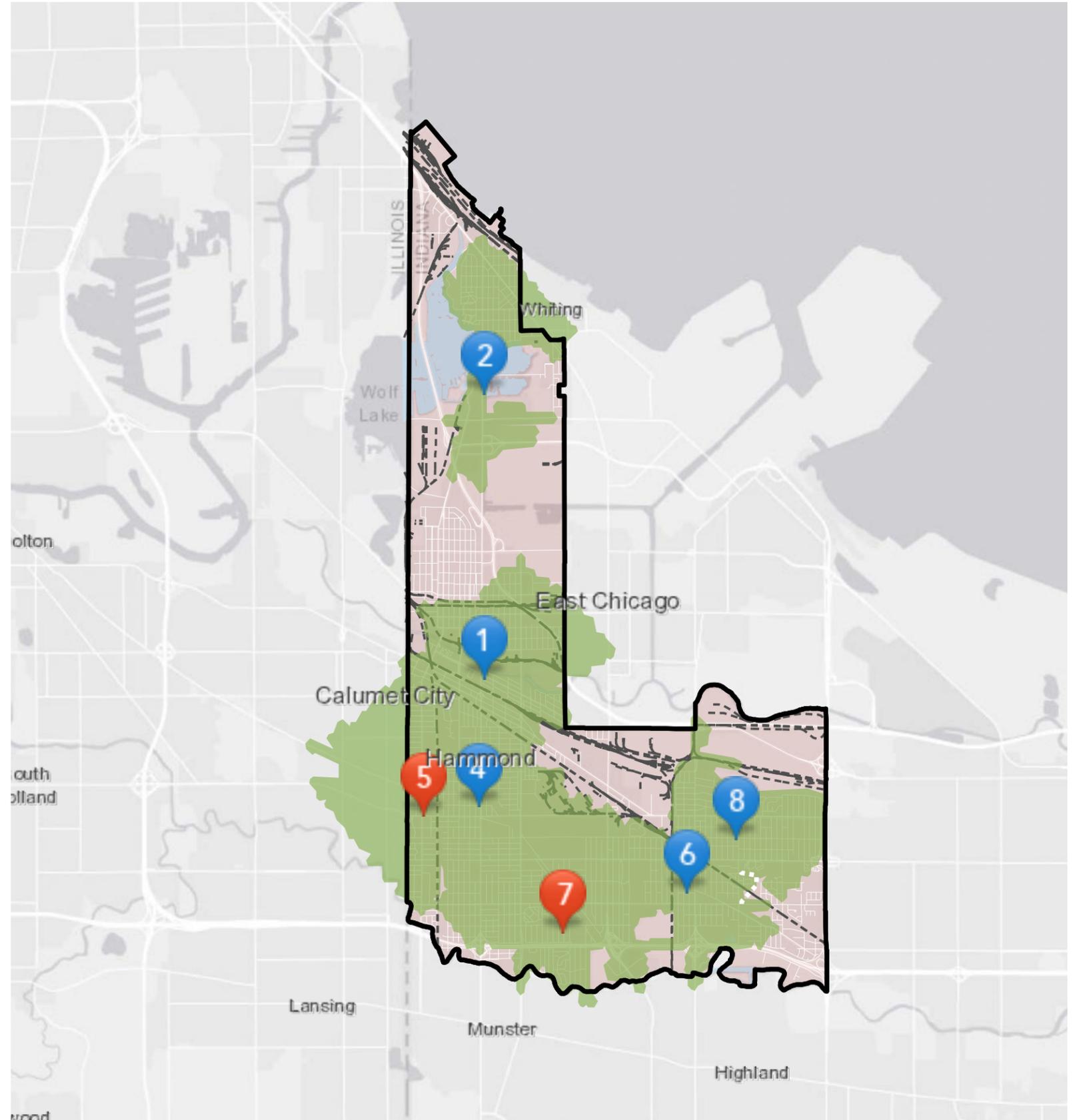
Population Outside of Recommended Radius: **15,940 (20.5%)**

Average Annual Calls Outside of Recommended Radius: **1,955 (15%)**

Summary:

The following map depicts a 1.5-mile drive radius from all stations, which is the ISO PPC Standard for Engine Companies.

**Assuming standard traffic and driving conditions.*



Mapping Limitations

Majority Data-Driven

One limitation of this study is the fact that it is highly data-driven, eliminating the "human" factor. In interviews with the Fire Department drivers, our team recognized that there are many factors that are considered by a driver when traveling to a site, including:

- Railroad traffic and if a train is stopped on the tracks
- School drop-off and pick-up times
- Heavier traffic times

The image on the right highlights that the 4-minute travel radius is an average travel time radius, and there are historical calls that were completed in less than 4-minutes.

LEGEND

- 4-minute recommended drive radius*, not allowing at-grade railroad crossing
- Engine Areas 5 & 7 - not currently covered
- Call completed in less than 4-minute travel time
- Call completed in greater than 4-minute travel time

